WHAT IS CLAIMED IS:

1. A method of detecting a film image, comprising:

(a) receiving a predetermined number of similarity values of two adjacent fields of the same kind from an image having interlaced fields;

(b) classifying the similarity values which are received into a first group and a second group;

(c) converting the similarity values classified in the first group and the similarity values classified in the second group into values different from each other; and

(d) determining whether the image is a film image according to a period of the converted values.

2. The method of claim 1, wherein the similarity values comprise values of a sum of absolute differences of differences between pixel values of the two adjacent fields of the same kind.

3. The method of claim 2, wherein the predetermined number in step (a) corresponds to two times of a pattern period of the sum of absolute differences.

4. The method of claim 2, wherein step (b) comprises:

(b1) aligning the values of the sum of absolute differences in a one-dimensional coordinate system;

(b2) setting a central point of the first group to 0, and a central point of the second group to a maximum value of the values of the sum of absolute differences;

(b3) comparing a distance between a position of a value of the sum of absolute differences and the central point of the first group with a distance between the position of the value of the sum of absolute difference and the central point of the second group, and classifying the value of the sum of absolute differences to a group in which the position of the central point is nearest to the position of the value of the sum of absolute differences;

(b4) updating the central point of the group in which the value of the sum of absolute differences is classified; and

(b5) repeating steps (b3) and (b4) for additional values of the sum of absolute differences until the number of the values of the sum of the absolute differences classified in the first group and the second group is not changed.

5. The method of claim 4, wherein in step (b4), the central point of the group in which the value of the sum of absolute differences is classified is updated to a central value between the original central point and an added value of the sum of absolute differences.

6. The method of claim 4, wherein in step (b4), the central point is updated using the following equation:

$$C_0 = \frac{1}{n(\Phi_0)+1}[n(\Phi_0)\times C_0 + SAD_i]$$

$$C1 = \frac{1}{n(\Phi_1)+1}[n(\Phi_1)\times C_1 + SAD_i],$$

where C_0 represents the central point of the first group, C_1 represents the central point of the second group, SAD_i represents the predetermined number of values of the sum of absolute differences, Φ_0 and Φ_1 respectively represent the first group and the second group,

and $n(\Phi_0)$ and $n(\Phi_1)$ respectively represent the number of the values of the sum of absolute differences classified in the first group and the second group.

7. The method of claim 2, wherein in step (c), all of the values of the sum of absolute differences classified in the first group are converted into 0, and all the values of the sum of absolute differences classified in the second group are converted into 1.

8. The method of claim 1, wherein the similarity values are values of a sum of magnitudes of motion vectors between the two adjacent fields of the same kind.

9. The method of claim 8, wherein the predetermined number in step (a) corresponds to two times of a pattern period of the sum of magnitudes of motion vectors.

10. The method of claim 8, wherein step (b) comprises:

(b1) aligning the values of the sum of magnitudes of motion vectors in a one-dimensional coordinate system;

(b2) setting a central point of the first group to 0 and a central point of the second group to a maximum value among the values of the sum of magnitudes of motion vectors;

(b3) comparing a distance between a position of a value of the sum of magnitudes of motion vectors and the central point of the first group with a distance between the position of the value of the sum of magnitudes of motion vectors and the central point of the second group, and classifying the value of the sum of magnitudes of motion vectors to a group in which the position of the central point is nearest to the position of the value of the sum of magnitudes of motion vectors;

(b4) updating the central point of the group in which the value of the sum of magnitudes of motion vectors is classified; and

(b5) repeating steps (b3) and (b4) for additional values of the sum of magnitudes of motion vectors until the number of the values of the sum of magnitudes of motion vectors classified in the first group and the second group is not changed.

11. The method of claim 8, wherein in step (b4), the central point of the group in which the value of the sum of magnitudes of motion vectors is classified is updated to a middle value between the original central point and an added value of the sum of magnitudes of motion vectors.

12. A method of detecting a film image, comprising:

receiving a predetermined number of coordinate values (SAD, M) consisting of the sum of absolute differences and motion vectors of fields of an image;

classifying the coordinate values which are received into a first group and a second group;

converting the coordinate values classified in the first group and the second group into values different from each other; and

determining whether the image is a film image according to a period of the converted values.

13. The method of claim 12, wherein the image in step (a) has interlaced fields.

14. The method of claim 12, wherein the coordinate values consisting of the sum of absolute differences and the motion vectors are normalized using maximum values of the sum of absolute differences and the motion vectors.

15. The method of claim 12, wherein the predetermined number of the coordinate values consisting of the sum of absolute differences and the motion vectors in step (a) corresponds to two times of a pattern period of the coordinates.

16. The method of claim 12, wherein step (b) comprises:

(b1) aligning the coordinate values consisting of the sum of absolute differences and the motion vectors in a two-dimensional coordinate system;

(b2) setting a central point of the first group to (0, 0) and a central point of the second group to (1, 1);

(b3) comparing a distance between a position of a coordinate value consisting of the sum of absolute differences and the motion vectors and the central point of the first group with a distance between the position of the coordinate value consisting of the sum of absolute differences and the motion vectors and the central point of the second group, and classifying the coordinate value consisting of the sum of absolute differences and the motion vectors to a group in which the position of the central point is nearest to the position of the coordinate value consisting of the sum of absolute differences and the motion vectors;

(b4) updating the central point of the group in which the coordinate value consisting of the sum of absolute differences and the motion vectors is classified; and

(b5) repeating steps (b3) and (b4) for additional coordinate values until the number of the coordinate values consisting of the sum of absolute differences and the motion vectors classified in the first group and the second group is not changed.

17. The method of claim 16, wherein in step (b4), the central point of the group in which the coordinate value consisting of the sum of absolute differences and the motion vectors is classified is updated to a middle value between the original value and an added coordinate value consisting of the sum of absolute differences and the motion vectors.

18. The method of claim 16, wherein in step (b4), the central point is updated using the following equation:

$$C_0 = \frac{1}{n(\Phi_0)+1}[n(\Phi_0)\times C_0+(SAD'_i, M'_i),]$$

$$C1 = \frac{1}{n(\Phi_1)+1}[\, n(\Phi_1)\times C_1+(SAD'_i, M'_i)],$$

where C_0 represents the central point of the first group, C_1 represents the central point of the second group, (SAD'_i, M'_i) represents the input predetermined number of coordinate values consisting of the sum of absolute differences and the motion vectors, Φ_0 and Φ_1 respectively represent the first group and the second group, and $n(\Phi_0)$ and $n(\Phi_1)$ respectively represent the number of the values of the sum of absolute differences and the motion vectors classified in the first group and the second group.

19. The method of claim 12, wherein in step (c), all of the coordinate values consisting of the sum of absolute differences and the motion vectors classified in the first group are converted into 0, and all the coordinate values consisting of the sum of absolute differences and the motion vectors classified in the second group are converted into 1.

20. An apparatus for detecting a film image, comprising:

a characteristic information receiving portion for receiving similarity values of two adjacent fields of the same kind from an image having interlaced fields;

a grouping portion for grouping the similarity values received by the characteristic information receiving portion; and

an image determining portion for determining whether the image is a film image according to a period of output values converted into a binary pattern after grouping.

21. The apparatus of claim 20, wherein the similarity values are a sum of absolute differences meaning differences between pixel values of the two adjacent fields of the same kind.

22. The apparatus of claim 20, wherein the similarity values are a sum of magnitudes of motion vectors of the two adjacent fields of the same kind.

23. The apparatus of claim 20, wherein the similarity values are coordinate values obtained using information regarding the sum of absolute differences and information regarding the sum of motion vectors.

24. The apparatus of claim 23, wherein the coordinate values consisting of the sum of absolute differences and the motion vectors are normalized with respect to maximum values of the sum of absolute differences and the motion vectors.

25. A computer-readable recording medium having recorded thereon a program for executing an image detection method in a computer, the method comprising:

(a) receiving a predetermined number of similarity values of two adjacent fields of the same kind from an image having interlaced fields;

(b) classifying the similarity values which are received into a first group and a second group;

(c) converting the similarity values classified in the first group and the second group into values different from each other; and

(d) determining whether the image is a film image according to a period of the converted values.

26. A computer-readable recording medium having recorded thereon a program for executing an image detection method in a computer, the method comprising:

(a) receiving a predetermined number of coordinate values consisting of a sum of absolute differences and motion vectors of fields constituting an image;

(b) classifying the coordinate values consisting of a sum of absolute differences and the motion vectors into a first group and a second group;

(c) converting the coordinate values consisting of the sum of absolute differences and the motion vectors classified in the first group and the second group into values different from each other; and

(d) determining whether the image is a film image according to a period of the converted values.